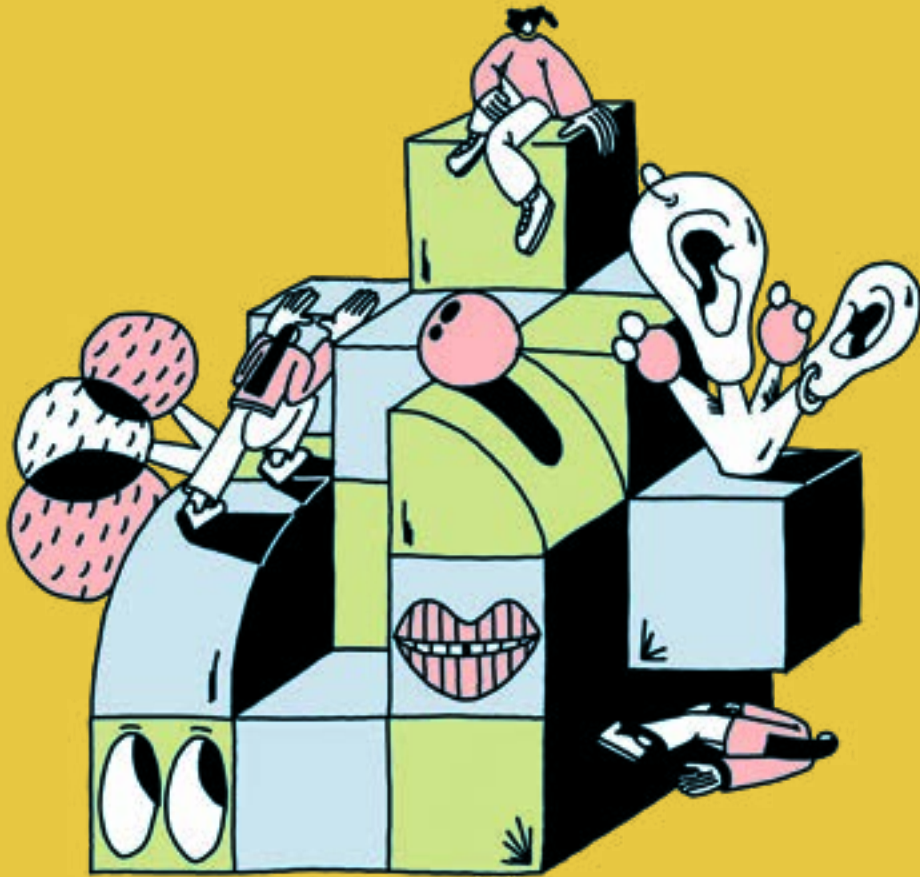


MAKING SENSE OF THE FUTURE





Transform future language

Deconstruct and reconstruct future metaphors

This exercise invites you to uncover the hidden assumptions and concepts within the language used in relation to digital future(s). Test and reflect on language-reflexive and critical approaches to thinking about futures.

	45–60 min		advanced
	alone or in groups		printouts and pens

INTRO	Transform future language	2
<p style="text-align: center;"> “Future exists only as a linguistically formulated future. [...] This is because we don't have current physical or scientific access to the future since no one can observe future presences [...]. And due to our lack of linguistic access with regard to the future, the way we talk about the future today is of crucial importance.” </p> <p style="text-align: center;"> <i>Grunwald, A. (2009) Wovon ist die Zukunftsforschung eine Wissenschaft?</i> </p>		
<p>This exercise is dedicated to challenging inherent assumptions and current reality to uncover alternative worldviews. By examining common metaphors and narratives, foundations of our thinking can be uncovered and challenged. Metaphors are figures of speech in which a word or phrase denoting one kind of object or action is used in place of another to suggest a likeness or analogy between them. Through transforming metaphors and myths associated with narratives, the present can be reframed and new futures can be opened.</p> <p>When we think and talk about the future, we use concepts of the past to imagine and explain future developments. Our construction of reality takes place through communication, which in turn shapes our view of the world through metaphors. Metaphors can describe new phenomena by describing one kind of thing in terms of another – yet they carry normative implications that shape our thoughts and are further cultivated through discourse.</p>		
ASSIGNMENT	<p>In this assignment, <i>Causal Layered Analysis</i> is introduced. Deconstruct and reconstruct metaphors about digital futures and practice language-reflexive and critical approaches to thinking about futures.</p>	
LEARNING GOAL	<p>This exercise invites you to uncover the hidden assumptions and concepts within our language and discourses around digital futures. You will gain awareness of how language shapes our understanding of the world. By completing this exercise you will be able to create transformative spaces for the creation of alternative futures.</p>	
PREPARATION	<p>Print out the canvas and bring sufficient pens.</p>	

<p>MANUAL</p>	<p>Transform future language</p>	<p>3</p>
<p></p>	<p>EXAMPLE</p> <p>Data is the new gold</p> <p>What is the source domain on which the metaphor is built?</p> <p>“Data is the new gold” is a resource-based metaphor (“Goldrush” metaphor). The economic potential of data can be harnessed for private or public benefit.</p> <p>What normalities and “self-evident” facts are conveyed?</p> <p>Data is seen as a material that can be exploited for profit (profit thinking).</p> <p>What does the metaphor hide?</p> <p>The exploration and extraction of oil and gold is a highly skilled and capital-intensive activity.</p> <p>What connotations does the metaphor entail?</p> <p>It could also be seen as a natural metaphor, implicitly implying that data is “naturally beyond political control”. It further suggests that the exploitation of resources results in prosperity.</p>	
<p>LET'S START</p> <p></p>	<p>This assignment is focused on the 4th layer of <i>Causal Layered Analysis</i>: Metaphors and Myths.</p> <p>THE TECHNIQUE OF CAUSAL LAYERED ANALYSIS</p> <p>Litany: The official description of a problem. Formulated as an externalised reality, often disconnected from other perspectives, e.g. a newspaper headline such as “AI will take over all our jobs”.</p> <p>Systemic causes: Short-term analysis of a given problem. Historical variables are explored. Systemic causes can be found in e.g. policy reports.</p> <p>Worldview/discourse: Discern deeper assumptions behind the problem and try to understand the issues from multiple worldviews/perspectives, e.g. neoliberal perspectives vs ecological worldviews or rational vs spiritual perspectives. Engage in critical thinking!</p> <p>Metaphors and myths: Analysis of deep stories and unconscious dimensions of a problem. Metaphors and myths underpin and support worldviews. By uncovering metaphors and reconstructing them into new metaphors, new narratives can be formed that enable new solutions.</p>	

MANUAL	Transform future language	4
STEP 1	<p>What metaphors of digitalisation come to mind? Choose a metaphor about digitalisation that interests you, or pick one from the following:</p> <ul style="list-style-type: none"> ▪ web ▪ platform ▪ data is the new gold ▪ digital player ▪ cloud ▪ echo chamber ▪ virus ▪ artificial intelligence 	
STEP 2	<p>Engage critically with the metaphor and challenge the worldview connected to it.</p> <p>Analyse the selected metaphor along with these questions:</p> <ul style="list-style-type: none"> ▪ What does this metaphor entail? ▪ What is the source on which the metaphor is built on? ▪ What problems does the metaphor refer to? ▪ What connotations does the metaphor entail? ▪ What normalities and seemingly self-evident facts are conveyed? ▪ What does the metaphor hide? ▪ What fears, constraints and freedoms emanate from the metaphor? 	
STEP 3	<p>Reconstruct your metaphor by giving it a new meaning or applying a different concept:</p> <ul style="list-style-type: none"> ▪ Can you reverse the meaning of the metaphor? ▪ What might be a new metaphor or different narrative? <p>Based on your new metaphor, answer the following questions, moving on the canvas from bottom to top:</p> <ol style="list-style-type: none"> 1 How does this new metaphor affect worldviews? 2 How does the future imagined in your metaphor affect systemic causes? 3 Draft a problem or litany (e.g. in the form of a newspaper headline) based on that future image. 4 What possible implications and problems might arise from this alternative metaphor? 	

MAKING SENSE OF THE FUTURE



From Weak signals to Megatrends

Exploring signals of change

Find signals, innovations and possible trends, and explore possible future scenarios based on one trend. Train your abilities to collect, identify and interpret possible drivers of change, and reflect your assumptions about the future.

	60–90 min	★★☆	intermediate
	in groups		printouts and diverse utensils

INTRO	From Weak signals to Megatrends	2
--------------	---------------------------------	----------


“The future is a much better guide to the present than the past. Be prepared, be ready to trade everything you know about history... for a single glimpse of its future.”

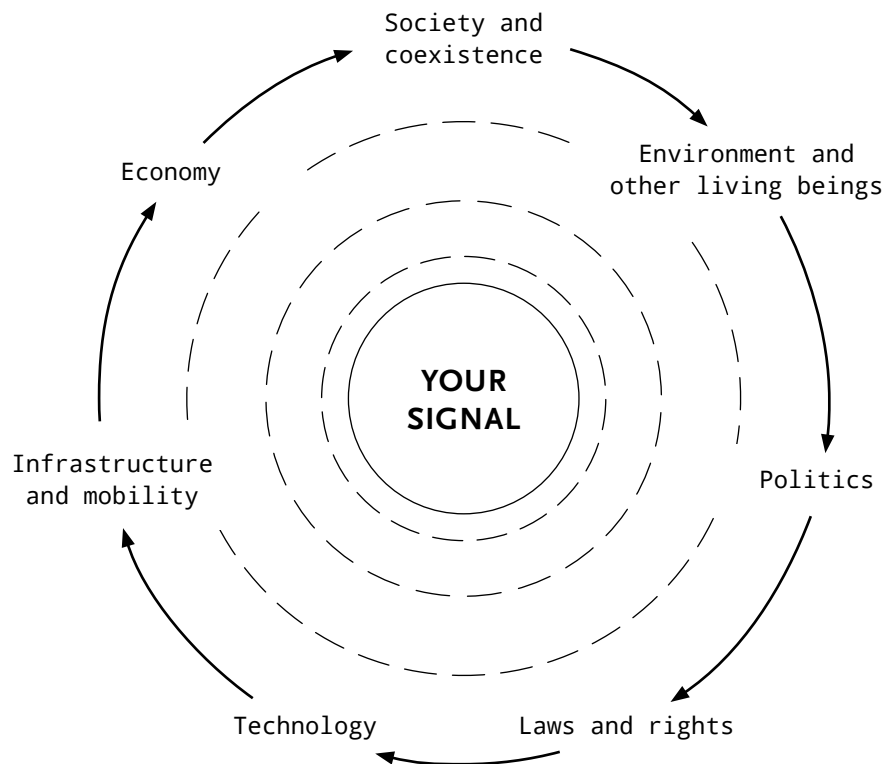
Kodwo, E. (1988) *More Brilliant than the Sun*.

When anticipating future developments, solely focusing on a continuation of the present can lead you to miss hints and early signals that may be hidden below the surface. One way to explore possible futures is to assess the present for signals, trends and signs of future developments.

Fundamental lines of development are often referred to as megatrends: slow, global, yet far-reaching transformation processes that have a lasting impact on the economy, politics, ecology, mobility and society. Current megatrends include the removal of gender stereotypes, a move towards a new culture of pluralism or connectivity, and the novel communication technologies changing the way we interact and do business. However, future drivers of change can often go unnoticed; these are weak signals: warnings, events or developments which are still too incomplete to be fully anticipated. Recognising weak signals expands our view and trains our future thinking.

ASSIGNMENT	Find signals, innovations and possible trends. What if these signals became stronger? How would they influence different domains of our lives? Explore possible future scenarios based on one signal.
LEARNING GOAL	By completing this exercise you will train your abilities to collect, identify and interpret possible drivers of change, and will thereby be able to challenge and reflect on your assumptions about the future. This will help you identify possible new paths by recognising signals in everyday life and their impact.
PREPARATION	Print out the attached templates (your signal + 7 areas) for each group (3–5 people) and place them on a whiteboard or wall (see sketch below). Bring sufficient pens and colourful post-its.

MANUAL	From Weak signals to Megatrends	3
LET'S START	<p>Heighten your senses and extend your sensors:</p> <ul style="list-style-type: none"> ▪ What novelty (app, device, feature, rumour, news) has surprised you recently? ▪ Have you heard about a development in a report that you were unaware of? ▪ Has a friend told you about an unconventional innovation? ▪ Have you come across a recent study that startled you? ▪ Or have you overheard a conversation or observed something unexpected in public? 	
STEP 1	<p>Form groups of 3–5 persons. Think of a signal that challenges your current assumptions or world views. Decide on one signal together.</p> <div style="border: 1px solid black; background-color: #ffffcc; padding: 10px; margin-top: 10px;"> <div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px; text-align: center;">  </div> <div> <p>WEAK SIGNALS AND MEGATRENDS</p> <p>Weak signals have the following key characteristics:</p> <ul style="list-style-type: none"> ▪ unusual, surprising information that does not fit into existing expectation grids ▪ they can be interpreted as omens or harbingers of future changes ▪ weak signals are, in particular, warnings, events or developments that are still too incomplete to enable an accurate assessment of their impact and/or to permit a determination of reactions <p>Megatrends have the following key characteristics:</p> <ul style="list-style-type: none"> ▪ global ▪ long-term (they take effect slowly and gradually over decades) ▪ far-reaching transformation processes that have a lasting impact on the economy, technology, ecology, politics and society </div> </div> </div>	
STEP 2	<p>Examine the signal more closely: combine your signal with the 7 areas of the printed out templates. In which ways could it impact different areas within a timeline of 10 years from now? The areas are: Society and coexistence, environment and other living beings, politics, laws and rights, technology, infrastructure and mobility, and economy.</p> <p>Note down your ideas on a post-it and place them on the template next to the affected area. Explore the scenario further by moving along the different areas and discuss together.</p>	



EXAMPLE

Health consciousness vs. sterile society

In recent decades, an increased awareness of health has developed in many societies. We are encouraged to live more healthily and optimise our bodies and our lifestyle. This trend is often accompanied by digital offerings (such as fitness apps, pedometers, heartrate trackers and menstrual cycle apps).

This trend has been further amplified by the global Coronavirus Pandemic. We have learnt to take preventative measures such as limiting our social lives and changing our hygiene routines.

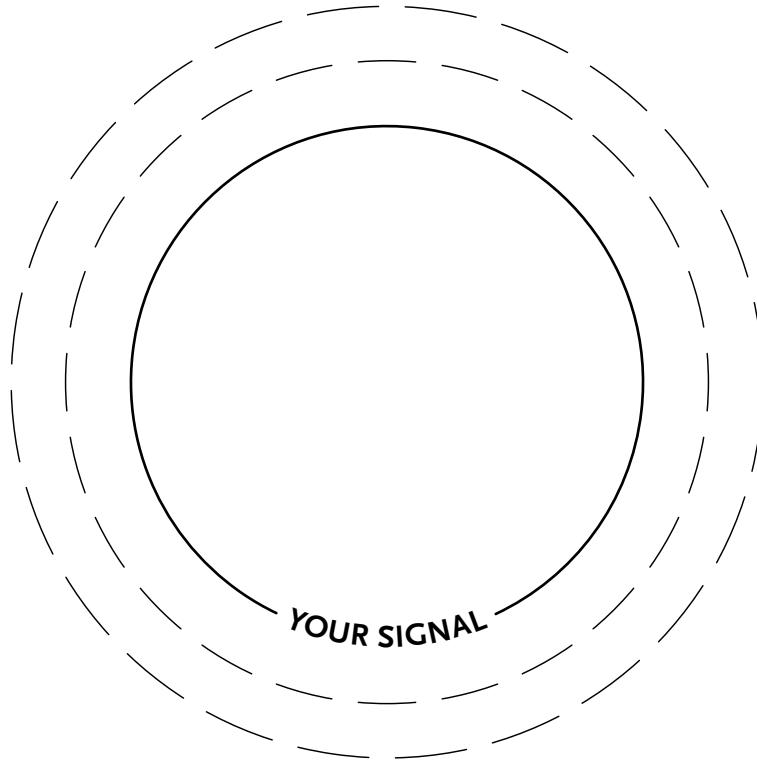
How can we think about this trend further?

On the one hand, a healthy and sustainable life is desirable and worth aiming for. On the other hand, it raises the question of how we want to use digital services in the future, protect our privacy, and reconnect in social and cultural spheres. In many areas, a healthy life is also associated with privileges. How can services be made accessible to all? What scenarios and development paths are conceivable?

MANUAL	From Weak signals to Megatrends	5
STEP 3	<p>Discuss your results in a group.</p> <ul style="list-style-type: none"> ▪ What would it take for your signals to become a megatrend? ▪ Do you have any ideas on how to influence trends? ▪ What would be the positive and negative effects of your examples? ▪ What social factors would remain unchanged? ▪ Speculate: How could your signal develop within a timeline of 20 or 30 years? What will happen if the signal evolves into a megatrend? 	
	<div data-bbox="379 1883 491 1989" style="float: left; margin-right: 10px;"> </div> <div data-bbox="544 1935 1043 1973" style="text-align: center;"> <p>CONTINUE WITH OUR TOOLBOX</p> </div> <div data-bbox="544 2002 1126 2078" style="text-align: center;"> <p>For a different take on digital futures, try the tool: Transform future language</p> </div>	

EXTRAS	From Weak signals to Megatrends	6
SOURCES	<p>Weak signals ^{EN} Holopainen, M. & Toivonen, M. (2012). "Weak signals: Ansoff today", Futures, https://doi.org/10.1016/j.futures.2011.10.002</p> <p>Weak signals ^{EN} "Using Weak Signals for Business". Go For. Accessible at https://gofore.com/en/using-weak-signals-in-business</p> <p>Weak signals ^{EN} Schoemaker, P. & Day, G. (2009) "How to Make Sense of Weak Signals". MIT Sloan Review. Accessible at https://sloanreview.mit.edu/article/how-to-make-sense-of-weak-signals</p> <p>Megatrends ^{DE} Steinmüller, K. (2014). "Zukunftstrends 2025". Z Punkt. Accessible at https://steinmuller.de/de/zukunftsforschung/papers/Artikel_Oberfl.pdf</p>	
AUTHORS	Authors: Philine Janus & Johanna Wallenborn	

Society and coexistence



Infrastructure and mobility



Economy

Politics



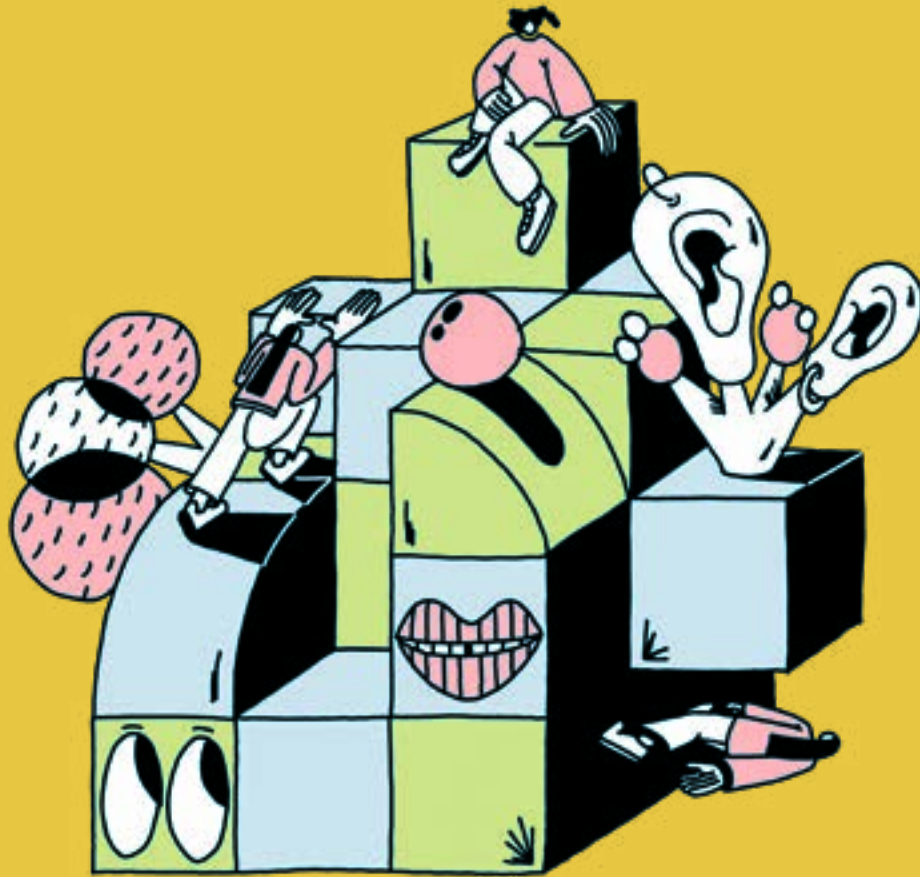
Technology

Environment and
other living beings



Law and rights

MAKING SENSE OF THE FUTURE





Transform future language

Deconstruct and reconstruct future metaphors



This exercise invites you to uncover the hidden assumptions and concepts within the language used in relation to digital future(s). Test and reflect on language-reflexive and critical approaches to thinking about futures.

	45–60 min		advanced
	alone or in groups		printouts and pens

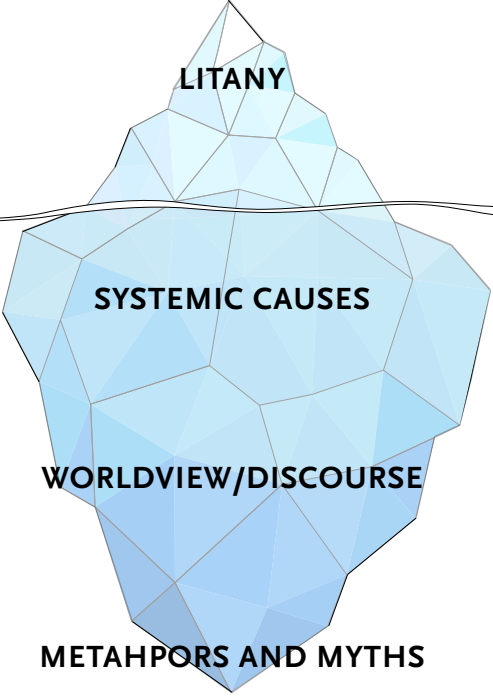
INTRO	Transform future language	2
<p style="text-align: center;"> “Future exists only as a linguistically formulated future. [...] This is because we don't have current physical or scientific access to the future since no one can observe future presences [...]. And due to our lack of linguistic access with regard to the future, the way we talk about the future today is of crucial importance.” </p> <p style="text-align: center;"> <i>Grunwald, A. (2009) Wovon ist die Zukunftsforschung eine Wissenschaft?</i> </p>		
<p>This exercise is dedicated to challenging inherent assumptions and current reality to uncover alternative worldviews. By examining common metaphors and narratives, foundations of our thinking can be uncovered and challenged. Metaphors are figures of speech in which a word or phrase denoting one kind of object or action is used in place of another to suggest a likeness or analogy between them. Through transforming metaphors and myths associated with narratives, the present can be reframed and new futures can be opened.</p> <p>When we think and talk about the future, we use concepts of the past to imagine and explain future developments. Our construction of reality takes place through communication, which in turn shapes our view of the world through metaphors. Metaphors can describe new phenomena by describing one kind of thing in terms of another – yet they carry normative implications that shape our thoughts and are further cultivated through discourse.</p>		
ASSIGNMENT	<p>In this assignment, <i>Causal Layered Analysis</i> is introduced. Deconstruct and reconstruct metaphors about digital futures and practice language-reflexive and critical approaches to thinking about futures.</p>	
LEARNING GOAL	<p>This exercise invites you to uncover the hidden assumptions and concepts within our language and discourses around digital futures. You will gain awareness of how language shapes our understanding of the world. By completing this exercise you will be able to create transformative spaces for the creation of alternative futures.</p>	
PREPARATION	<p>Print out the canvas and bring sufficient pens.</p>	

<p>MANUAL</p>	<p>Transform future language</p>	<p>3</p>
<div data-bbox="379 226 491 331" style="background-color: #d9ead3; padding: 5px; text-align: center;">  </div>	<p>EXAMPLE</p> <p>Data is the new gold</p> <p>What is the source domain on which the metaphor is built?</p> <p>“Data is the new gold” is a resource-based metaphor (“Goldrush” metaphor). The economic potential of data can be harnessed for private or public benefit.</p> <p>What normalities and “self-evident” facts are conveyed?</p> <p>Data is seen as a material that can be exploited for profit (profit thinking).</p> <p>What does the metaphor hide?</p> <p>The exploration and extraction of oil and gold is a highly skilled and capital-intensive activity.</p> <p>What connotations does the metaphor entail?</p> <p>It could also be seen as a natural metaphor, implicitly implying that data is “naturally beyond political control”. It further suggests that the exploitation of resources results in prosperity.</p>	
<p>LET'S START</p> <div data-bbox="379 1301 491 1413" style="background-color: #fff2cc; padding: 5px; text-align: center;">  </div>	<p>This assignment is focused on the 4th layer of <i>Causal Layered Analysis</i>: Metaphors and Myths.</p> <div style="background-color: #fff2cc; padding: 10px;"> <p>THE TECHNIQUE OF CAUSAL LAYERED ANALYSIS</p> <p>Litany: The official description of a problem. Formulated as an externalised reality, often disconnected from other perspectives, e.g. a newspaper headline such as “AI will take over all our jobs”.</p> </div> <div style="background-color: #d9ead3; padding: 10px;"> <p>Systemic causes: Short-term analysis of a given problem. Historical variables are explored. Systemic causes can be found in e.g. policy reports.</p> <p>Worldview/discourse: Discern deeper assumptions behind the problem and try to understand the issues from multiple worldviews/perspectives, e.g. neoliberal perspectives vs ecological worldviews or rational vs spiritual perspectives. Engage in critical thinking!</p> <p>Metaphors and myths: Analysis of deep stories and unconscious dimensions of a problem. Metaphors and myths underpin and support worldviews. By uncovering metaphors and reconstructing them into new metaphors, new narratives can be formed that enable new solutions.</p> </div>	

MANUAL	Transform future language	4
STEP 1	<p>What metaphors of digitalisation come to mind? Choose a metaphor about digitalisation that interests you, or pick one from the following:</p> <ul style="list-style-type: none"> ▪ web ▪ platform ▪ data is the new gold ▪ digital player ▪ cloud ▪ echo chamber ▪ virus ▪ artificial intelligence 	
STEP 2	<p>Engage critically with the metaphor and challenge the worldview connected to it.</p> <p>Analyse the selected metaphor along with these questions:</p> <ul style="list-style-type: none"> ▪ What does this metaphor entail? ▪ What is the source on which the metaphor is built on? ▪ What problems does the metaphor refer to? ▪ What connotations does the metaphor entail? ▪ What normalities and seemingly self-evident facts are conveyed? ▪ What does the metaphor hide? ▪ What fears, constraints and freedoms emanate from the metaphor? 	
STEP 3	<p>Reconstruct your metaphor by giving it a new meaning or applying a different concept:</p> <ul style="list-style-type: none"> ▪ Can you reverse the meaning of the metaphor? ▪ What might be a new metaphor or different narrative? <p>Based on your new metaphor, answer the following questions, moving on the canvas from bottom to top:</p> <ol style="list-style-type: none"> 1 How does this new metaphor affect worldviews? 2 How does the future imagined in your metaphor affect systemic causes? 3 Draft a problem or litany (e.g. in the form of a newspaper headline) based on that future image. 4 What possible implications and problems might arise from this alternative metaphor? 	

MANUAL	Transform future language	5
STEP 4	<p>Present your original and transformed metaphors and your litany to the group and collectively discuss your results. What are the underlying assumptions and worldviews, and how do your alternative metaphors shape our perception? What new realities might arise from your transformed metaphor?</p>	
	<div data-bbox="379 517 491 622" style="background-color: #d9ead3; padding: 5px; text-align: center;">  </div> <div data-bbox="544 562 882 600" style="background-color: #d9ead3; padding: 5px;">GUIDING QUESTIONS</div> <div data-bbox="560 629 1393 1014" style="background-color: #d9ead3; padding: 5px;"> <ul style="list-style-type: none"> ▪ What worked well? ▪ What is a new narrative or metaphor that would support your preferred future? ▪ Out of these alternative futures emerging from the new metaphors, which is your preferred one? ▪ What other metaphors can be imagined? ▪ How could the underlying worldviews of your new metaphors be supported by practice? ▪ Which strategies can be employed for you to realise the preferred future? </div> <div data-bbox="379 1883 491 1989" style="background-color: #d9ead3; padding: 5px; text-align: center;">  </div> <div data-bbox="544 1939 1042 1977" style="background-color: #d9ead3; padding: 5px;">CONTINUE WITH OUR TOOLBOX</div> <div data-bbox="544 2007 1126 2078" style="background-color: #d9ead3; padding: 5px;"> <p>For a different take on digital futures, try the tool: Newspaper from 2040.</p> </div>	

EXTRAS	Transform future language	6
SOURCES	<p>Metaphors ^{EN} Lakoff, G. & Johnson, M. (1980) Metaphors we live by. Chicago, University of Chicago Press.</p> <p>Digital Metaphors ^{EN} Alexander von Humboldt Institut für Internet und Gesellschaft (2017) Dossier. Metaphern der Digitalen Gesellschaft</p> <p>Digital Metaphors ^{EN} Wyatt, S. (2021) Metaphors in Critical Internet and Digital Media Studies New Media & Society, 23(2), 406–416. doi:10.1177/1461444820929324.</p> <p>Metaphors Definition ^{EN} Merriam Webster Dictionary (n.d.) Metaphor, https://www.merriam-webster.com/dictionary/metaphor</p> <p>Systematic Metaphor Analysis ^{DE} Schmitt, R., Schröder, J., & Pfaller, L. (2018). Systematische Metaphernanalyse. Springer Fachmedien Wiesbaden. doi:10.1007/978-3-658-21460-9</p> <p>Future Studies ^{DE} Grunwald, A. (2009) Wovon ist die Zukunftsforschung eine Wissenschaft?. In: Reinhold Popp & Elmar Schüll (Hrsg) (2009): Zukunftsforschung und Zukunftsgestaltung. Beiträge aus Wissenschaft und Praxis. Springer, Berlin, Heidelberg.</p> <p>Causal Layered Analysis ^{EN} Inayatullah, S. (1998) Causal Layered Analysis: Poststructuralism as Method. Futures, doi:10.1016/S0016-3287(98)00086-X</p> <p>Causal Layered Analysis ^{EN} Inayatullah, S. (2017) Causal Layered Analysis A Four-Level Approach to Alternative Futures RELEVANCE AND USE IN FORESIGHT</p> <p>Causal Layered Analysis ^{DE} Schmitt, R., Schröder, J., & Pfaller, L. (2018) Systematische Metaphernanalyse. Springer Fachmedien Wiesbaden, doi:10.1007/978-3-658-21460-9</p>	
AUTHORS	Authors: Philine Janus & Johanna Wallenborn	

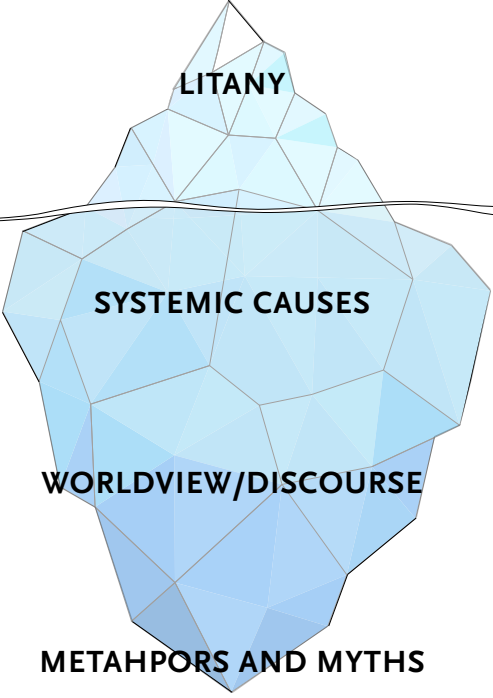


LITANY

SYSTEMIC CAUSES

WORLDVIEW/DISCOURSE

METAPHORS AND MYTHS



LITANY

SYSTEMIC CAUSES

WORLDVIEW/DISCOURSE

METAPHORS AND MYTHS
